

REMARKS

Claims 1-3 and 9 have been rejected under 35 U.S.C. § 102(b) as anticipated by Bahrle et al. (“Bahrle”). Claims 4-9 have been rejected under 35 U.S.C. § 103 as obvious over Bahrle et al. in view of Office Notice.

Claims 1-9 remain in the application. No claims have been amended, added or cancelled.

I. Request for withdrawal of Finality

For the reasons expressed herein, the instant application is in condition for allowance. However, to the extent that prosecution should continue, Applicants request that finality of the instant Office Action be withdrawn on two grounds. First, the rejection of claim 9 is unclear, in that it is both rejected under 35 U.S.C. § 102 as anticipated by Bahrle, and under 35 U.S.C. § 103 as obvious over Bahrle in view of Official Notice. These two rejections are incompatible, as the former asserts that all elements of claim 9 are found in Bahrle, while the latter effectively concedes that at least one element of claim 9 is not found in Bahrle such that reliance on official notice was necessary. These rejections are not offered as alternatives to each other, and never specify what claim term(s) is first considered present in the first rejection yet absent in the second rejection. Absent clarification, the instant Office Action does not provide Applicants with opportunity to provide a full response to the rejection.

Second, the instant claims were previously rejected over Bahrle in the first Office Action dated April 11, 2006, for which Applicants amended various claims and offered corresponding remarks in favor of patentability. In the subsequent Office Action of October 11, 2006, no rejection was presented over Bahrle, and Applicants arguments responsive to Bahrle were considered moot in view of new grounds of rejection without any substantive analysis by the Examiner. The current Office Action reintroduces the rejection over Bahrle, based on the same

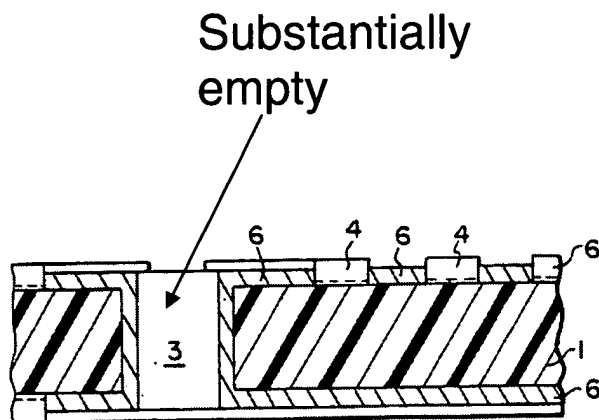
arguments that Applicants traversed in response to Office Action #1, yet the current Office Action does not refer or respond to Applicants' stated positions. It is thus unclear to Applicants as to why the prior amendments to the claims and the accompanying arguments failed to overcome Bahrle. Absent clarification, the instant Office Action does not provide Applicants with opportunity to provide a full response to the rejection.

II. Response to Substantive Rejections

Independent claim 1 has been rejected under 35 U.S.C. § 102 as anticipated by Bahrle. Applicants traverse the rejection.

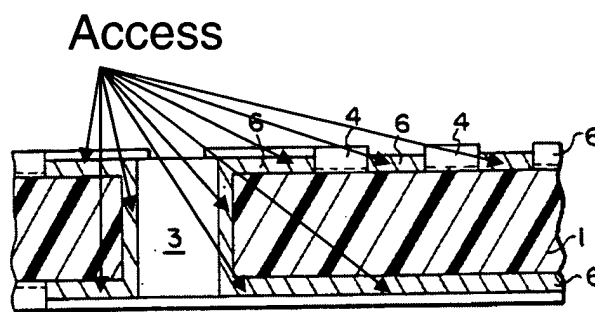
Claim 1 recites the step of "filling the hole in the board with a second conductor." To the extent that the Office Action equates the claimed hole with Bahrle hole 3 and the claimed second conductor with Bahrle

copper layer 6, then Bahrle Fig. 1F clearly shows that Bahrle copper layer 6 occupies only a small portion of hole 3. In direct contrast to the claim language, the bulk of Bahrle hole 3 is substantially empty. Bahrle hole 3 is, quite simply, not filled by copper layer 6. On this basis alone, the anticipation rejection under Bahrle cannot be maintained.



In addition, claim 1 recites "wherein the photoresist material substantially prevents the second conductor from contacting the first and second sides of the board during said filling." As best understood from the annotated Bahrle Fig. 1F on page 3 of the Office Action, the Office Action equates the claimed photoresist with Bahrle photoresist 4, which is alleged to "prevent 6 from contacting the first and second sides." By way of response, Applicants note that the claim

language recites that the photoresist “substantially prevents” the second conductor from touching the first and second sides. Yet Bahrle Fig. 1F clearly shows that Bahrle copper layer 6 contacts what appears to be on the order of 80+% of the surface area of the first and second sides of the Bahrle printed wiring board. While the Bahrle photoresist 4 may prevent the second conductor from reaching isolated portions of the first and second sides, this isolated prevention does not rise to the level of “substantially prevents” as recited in claim 1. To the contrary, the Bahrle copper layer 6 has substantial access to the first and second sides, exactly as it is intended to do and the polar opposite of the claim language. On this independent basis, the anticipation rejection under Bahrle cannot be maintained.



Accordingly, claim 1 recites at least two features that are neither taught nor suggested by the applied art. Withdrawal of the rejection and allowance of the same is therefore requested.

Claims 2 and 3, which depend from claim 1, have been rejected under 35 U.S.C. § as anticipated by Bahrle. For at least the reasons expressed with respect to claim 1, these dependent claims are patentably distinct over the applied art. In addition, claim 3 recites that the “plating step is electroplating.” As best understood, the Office Action equates the claimed first conductor (which is the subject of the plating step) with Bahrle copper layer 5. However, Bahrle copper layer 5 is applied by sputtering (Bahrle, col. 5, lns. 20-24), not electroplating, and thus distinct from Bahrle for at least this additional reason. Withdrawal of the rejection of claims 2 and 3 and allowance of the same are therefore requested.

Claims 4-8, which depend from claim 1, have been rejected under 35 U.S.C. § 103 as obvious over Bahrle in view of Official Notice. Applicants traverse the rejection. The Office

Action relies upon Official Notice for certain size limitations as recited in claims 4-8. Applicants disagree with the nature and application of the Official Notice on this point, although it need not be explored because such notice does nothing to provide what Bahrle is lacking from claim 1 as noted above, *i.e.*, filling the hole with the second conductor while the photoresist substantially prevents the second conductor from contacting the first and second sides of the board. Thus, claims 4-8 are patentably distinct over the applied art for at least the reasons discussed with respect to claim 1. Withdrawal of the rejection of these claims and allowance of the same is therefore requested.

Claim 9, which depends from claim 1, has been rejected under 35 U.S.C. § 102 as anticipated by Bahrle and under 35 U.S.C. § 103 as obvious over Bahrle in view of Official Notice that it is well known to fill holes with conductors for communication purposes. As discussed above, these rejections are inconsistent and cannot be responded to fully. However, with respect to the former rejection, as discussed above the Bahrle hole 3 is substantially empty, which is the exact opposite of the claim 9 language that the hole is substantially filled.

With respect to the latter rejection, that it may be well known to fill holes in boards for communication purposes has no bearing on whether it is obvious to fill Bahrle's hole 3 as proposed by the rejection. Bahrle already has a communication pathway via copper layer 6 extending from one side of the board to the other, such that filling the hole would serve no additional communication purpose. Indeed, Bahrle's entire invention goes out of its way to preserve the existence of the hole 3, which directly teaches away from filling it. Even if one were, in defiance of Bahrle's teachings, filling the hole with a conductor, then the combination would still fail to teach the combination of claim 9 because the photoresist does not substantially prevent contact with the conductor as recited in independent claim 1.

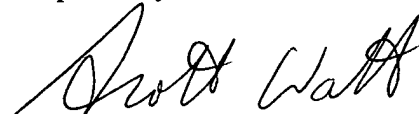
Accordingly, claim 9 recites a combination of features that are distinct from the applied art. Withdrawal of the rejection and allowance of the same are therefore requested.

In view of the foregoing, the application is in condition for allowance and a notice to that effect is respectfully requested.

The PTO is hereby authorized to charge/credit any fee deficiencies or overpayments to Deposit Account No. 19-4293.

If there are any questions, the Examiner is invited to call applicants' undersigned attorney at the number listed below.

Respectfully submitted,



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